DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CHESHIRE POND		Lake Area (ha):	23.07
Town: JAFFREY		Maximum depth (m):	3.0
County: Cheshire		Mean depth (m):	1.0
River Basin: Merrimac		Volume (m³):	233000
Latitude: 42°49'14		Relative depth:	0.6
Longitude: 72°00'40		Shore configuration:	1.59
Elevation (ft):	964	Areal water load (m/yr	:): 177.7
Shore length (m):		Flushing rate (yr^{-1}) :	
		P retention coeff.:	
<pre>% watershed ponded:</pre>	5.9	Lake type: ar	tificial

BIOLOGICAL:	17 February 1999	6 August 1998
DOM. PHYTOPLANKTON (% TOTAL) #1	NO WINTER PLANKTON	DINOBRYON 70%
#2	ANALYZED	RHIZOSOLENIA 25%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		17.03
DOM. ZOOPLANKTON (% TOTAL) #1		KERATELLA 74%
#2		POLYARTHRA 10%
#3		NAUPLIUS LARVA 4%
ROTIFERS/LITER		3723
MICROCRUSTACEA/LITER		484
ZOOPLANKTON ABUNDANCE (#/L)		4249
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		1.0
BOTTOM DISSOLVED OXYGEN (mg/L)	14.8	2.3
BACTERIA (E. coli, #/100 ml) #1		
#2	,	
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:	ICAL: Lake: CHESHIRE POND Town: JAFFREY					
	17 Febru	uary 1999	6 1	August	1998	
DEPTH (m)	1.0		1.5			
pH (units)	5.6		6.3			
A.N.C. (Alkalinity)	2.2		6.3			
NITRATE NITROGEN	0.11		0.11			
TOTAL KJELDAHL NITROGEN	0.20		0.70			
TOTAL PHOSPHORUS	0.006		0.033			
CONDUCTIVITY (µmhos/cm)	94.4		108.0			
APPARENT COLOR (cpu)	37		100			
MAGNESIUM			0.88			
CALCIUM			3.7			
SODIUM			15.1			
POTASSIUM			0.93			
CHLORIDE	22		26			
SULFATE	6		3			
TN : TP	52		25			
CALCITE SATURATION INDEX			3.6			

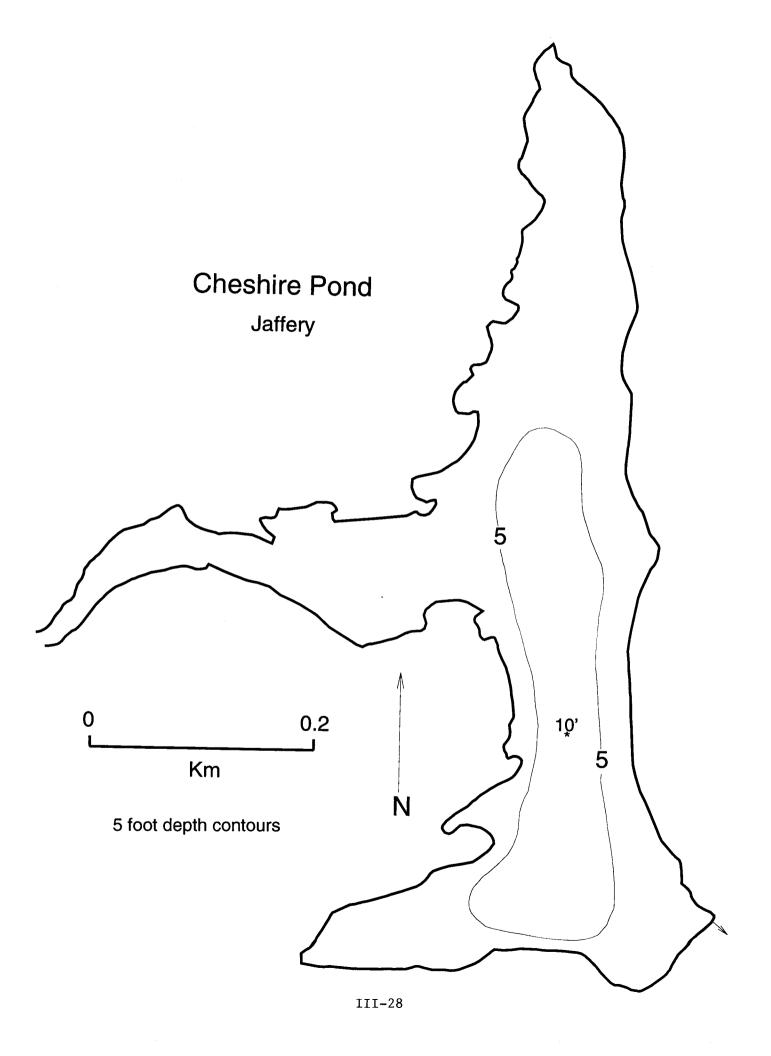
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	5	5	3	13	Eutro.

COMMENTS:

- 1. Cheshire Pond was previously surveyed and classified in 1988. There was no change in trophic class although there was less algal growth in 1998.
- 2. This is an impoundment on the Contoocook River. It has dark tea-colored water, and conductivity, sodium and chloride levels that suggest road salt runoff.
- 3. No public access. Private campground is located on the pond.



FIELD DATA SHEET

LAKE: CHESHIRE POND

DATE: 08/06/1998

TOWN: JAFFREY

WEATHER: OVERCAST

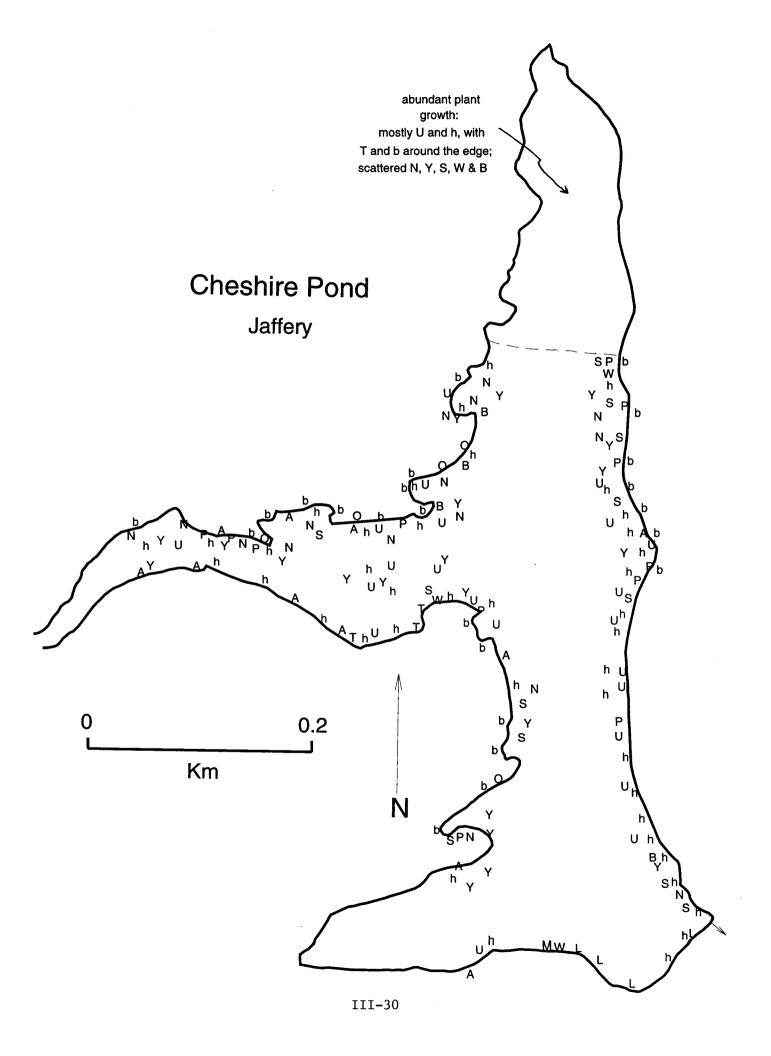
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	25.5	7.6	91 %
1.0	23.0	4.9	56 %
2.0	20.9	2.3	25 %
W.O			
			188.40.00

SECCHI DISK (m): 1.0 COMMENTS:

BOTTOM DEPTH (m): 2.3

TIME: 1210

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: CHESHIRE POND	IOWN: JAFFREY	DATE: 08/06/1998
Key	PLANT	ABUNDANCE	
кей	GENERIC	COMMON	ABUNDANCE
h	Myriophyllum heterophyllum	Water milfoil	Abundant
M	Myriophyllum humile	Water milfoil	Sparse
U	Utricularia	Bladderwort	Abundant
L	Lythrum salicaria	Purple loosestrife	Sparse
N	Nymphaea	White water lily	Common
A	Sagittaria	Arrowhead	Scattered
S	Sparganium	Bur reed	Sparse
Y	Nuphar	Yellow water lily	Common
В	Brasenia schreberi	Water shield	Sparse
P	Pontederia cordata	Pickerelweed	Common
W	Potamogeton	Pondweed	Scattered
b	Scirpus	Bulrush	Sparse
Т	Typha	Cattail	Sparse
0	Cephalanthus occidentalis	Buttonbush	Sparse

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

- 1. The exotic species of milfoil was abundant.
- 2. A large number of Canadian geese were observed; painted turtles were also present.